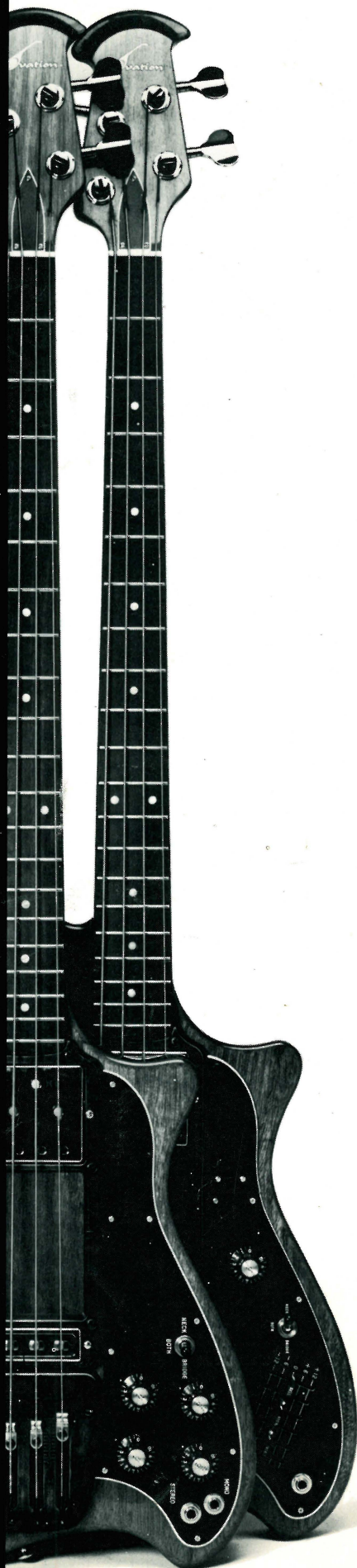


The Magnum.

Two steps closer to perfection.



Owner's
Manual

Solid, one-piece mahogany body.

Glued and bolted neck attachment.

Aluminum bezel functions as thumb and finger rest.

Magnum neck pickup with individual volume adjustment for each string.

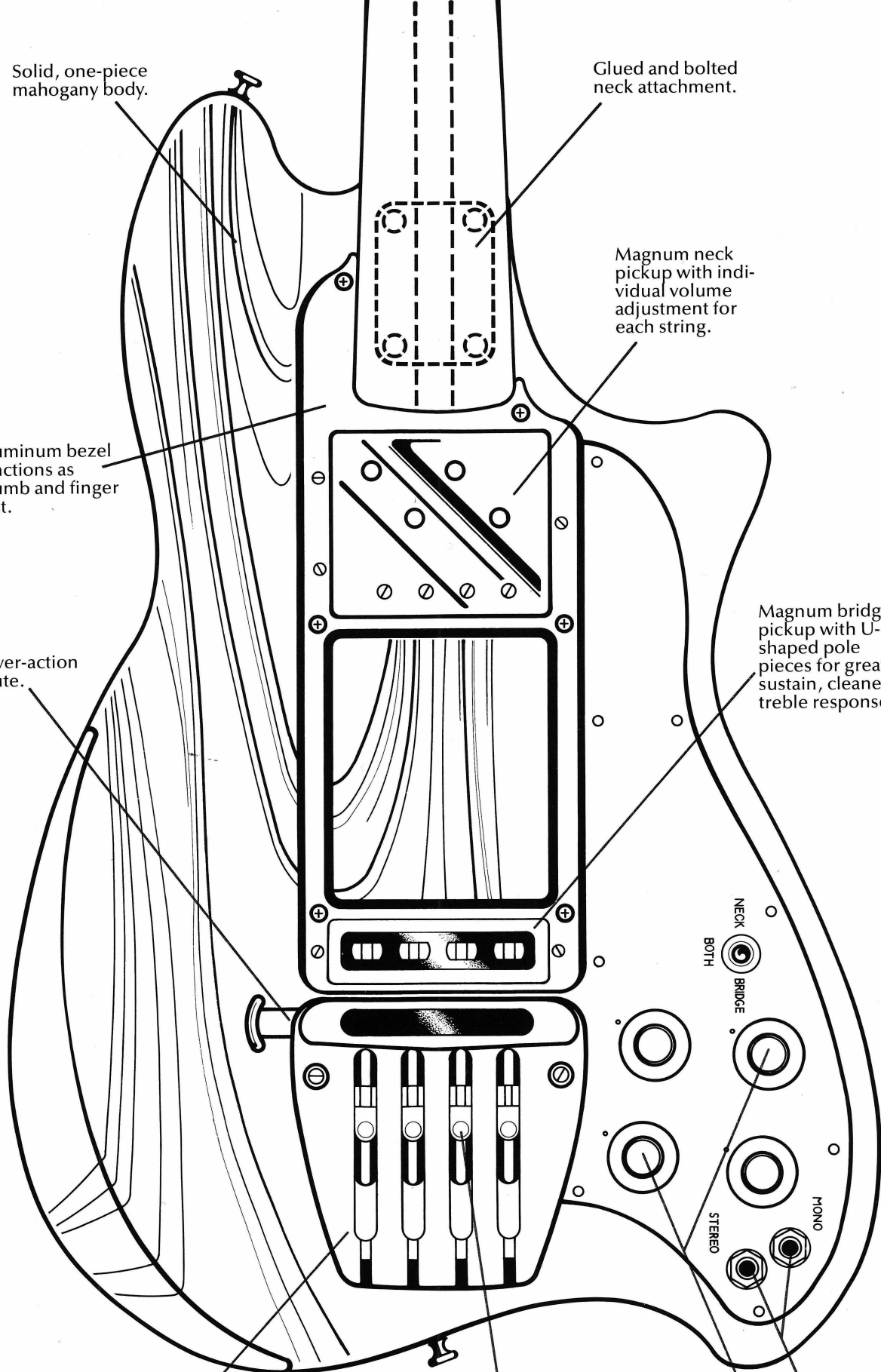
Lever-action mute.

Magnum bridge pickup with U-shaped pole pieces for greater sustain, cleaner treble response.

Cast aluminum tailpiece, slotted for quick string replacement and calibrated for exact compensation.

Individually-adjustable solid brass saddles.

Magnum electronics: volume and tone controls for each pickup, pickup selector switch, mono and stereo output jacks.



Introduction

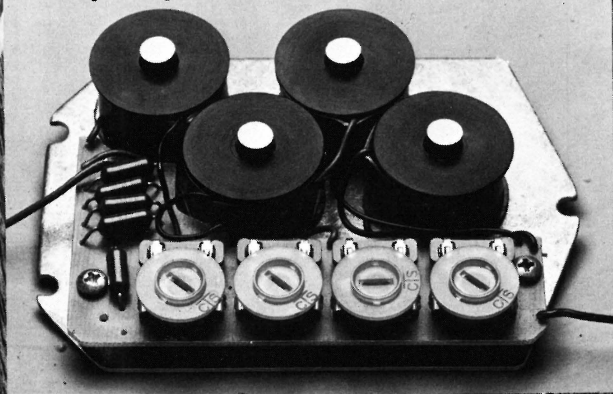
The Magnum bass has been carefully engineered to give you the performance features and tonal versatility demanded by professional musicians. During its development, Magnum was subjected to close scrutiny by Ovation's engineers. Their knowledge of sophisticated guitar electronics and pickup design has been applied to the Magnum basses. Many of the suggestions of our endorsees have also been incorporated in the production models. Whether you have chosen the Magnum 1 with stereo output or the Magnum 2 with a built-in graphic equalizer, you can be assured that your new instrument will deliver superb performance under all playing conditions.

We ask that you read this manual carefully. Become familiar with all of the Magnum's capabilities and features. If cared for properly, Magnum will give you many years of enjoyment.

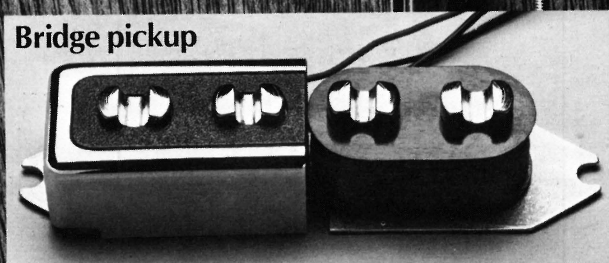
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Neck pickup



Bridge pickup



Pickups

The Magnum pickups are specially designed to give you high output, tonal versatility and balanced response in every register. The neck pickup has four separate coils, one for each string, wired in a humbucking design. The coils are staggered to allow as many windings as possible. The extra windings give the pickup a stronger signal. Individual volume controls on each coil let you balance the louder strings with the softer ones.

A unique concept in pickup design has been used for the Magnum bridge pickup. Each string is positioned between two halves of a large, U-shaped pole piece. The pole piece senses the presence of string vibration longer than conventional magnets. Output is strong, with more of the string's higher overtones and less midrange to muddy the tone. The Magnum bridge pickup is a two-coil, humbucking unit that can produce a bright, clean "piano bass" sound.

Pickup Adjustments

For optimum performance, we recommend that pickup adjustments be made in the following order:

1. Neck pickup height adjustment.

You may increase or decrease the output of the neck pickup by changing the distance between the magnets and the strings. The neck pickup has a tri-mount height adjustment. The screws are mounted on rubber bushings to absorb excessive vibration and minimize feedback. They are located in the bezel, on either side of the pickup. Clockwise rotation of the screws raises the pickup. Counterclockwise rotation lowers it. Be sure that you do not raise the pickup so high that the instrument will not play cleanly at the 20th fret.

2. Neck pickup balance adjustment.

To accommodate the inherent differences in bass strings, each coil on the neck pickup has its own volume potentiometer. The pots are wired to resistors to maintain a minimum volume level from each string.

Using a small screwdriver, turn all the volume pots clockwise as far as they will go. The pickup will now produce maximum output for each string.

Now, find the softest string and lower the volume on the other louder strings until all the strings have the same volume and are balanced. It is important that at least one of the volume pots be set at maximum output, or the pickup will not operate at optimum efficiency.

3. Bridge pickup height adjustment.

To prevent unwanted volume loss or gain when switching pickups, the bridge pickup should be balanced with the neck pickup. To do so, use the two height adjustment screws located in the bezel, on either side of the pickup. To boost output, raise the pickup by turning the screws clockwise. Turn the screws counterclockwise to lower output. You may also choose to enhance either treble or bass response by raising only one end of the pickup. Again, the height of the pickup should not interfere with the instrument's playability at the 20th fret.

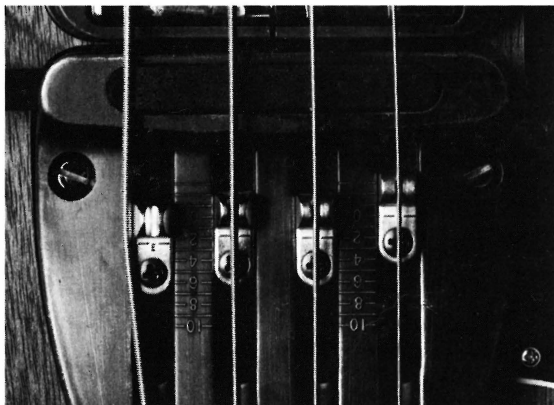


Figure 1

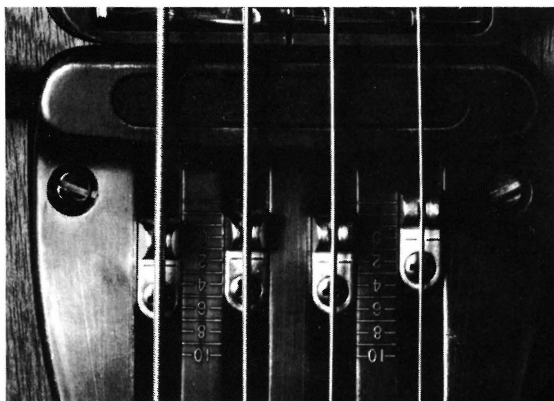
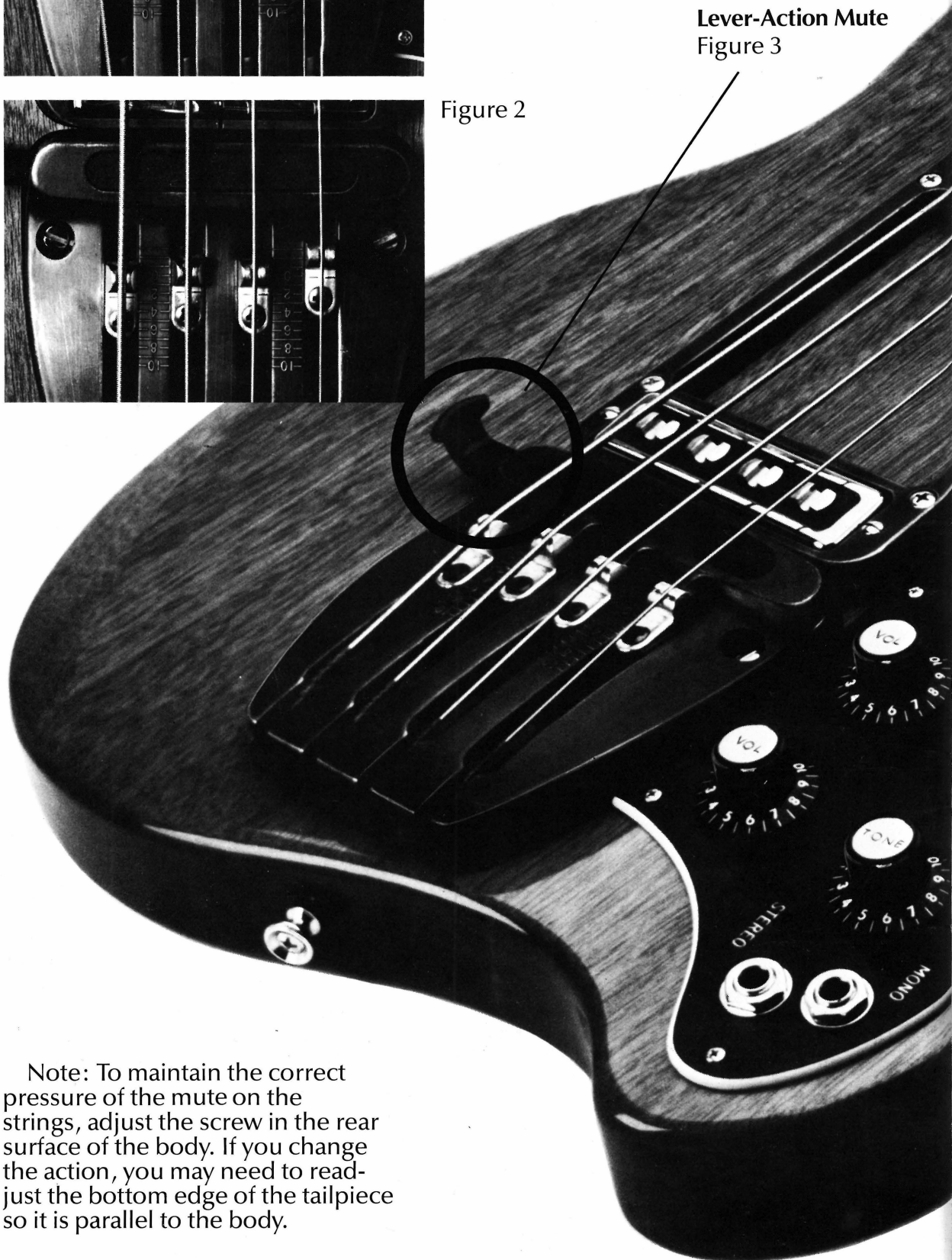


Figure 2

Lever-Action Mute
Figure 3



Note: To maintain the correct pressure of the mute on the strings, adjust the screw in the rear surface of the body. If you change the action, you may need to readjust the bottom edge of the tailpiece so it is parallel to the body.

Tailpiece

The Magnum tailpiece was designed to give you a simple, accurate way to adjust the intonation of your instrument. Because string gauges vary widely, we recommend that you check the intonation each time you change the strings on your bass. We have found, for example, that the proper tailpiece setting for two G strings of the same gauge, from the same manufacturer, can vary as much as .4".

The markings on the Magnum tailpiece give you a broad range of string-length settings (from 33.8" to 35"). When the reference mark on the string saddle is adjusted to line up with "0" on the tailpiece, the string length is exactly 34" (the scale length). There are 14 marks on the tailpiece placed 0.1" apart. For example, when the saddle lines up with the line marked "2" on the tailpiece, the string length is 34.2".

Intonation Adjustment

Use the following procedure for checking and adjusting the intonation:

1. Play the harmonic directly above the 12th fret by touching the string lightly with your left hand while plucking the string. Let the harmonic ring for a few seconds.
2. Play the note at the 12th fret and compare it to the harmonic. There will be a slight difference in the timbre of the two tones, but their pitch should be the same. If they *do not* match, follow step 3 or 4.
3. If the fretted note is flat, move the saddle closer to the bridge pickup. Check the fretted note with the harmonic and readjust if necessary.
4. If the fretted note is sharp, move the saddle away from the bridge pickup. Check the fretted note against the harmonic and readjust if necessary.

To adjust the string saddle, slip the string out of its slot, loosen the adjustment screw and move the saddle to the desired position. Tighten the screw before replacing the string. See Figure 1, page 4.

Action Adjustments

Action is measured as the distance from the top of the 12th fret to the bottom of the string. The two large screws recessed in the tailpiece adjust the action on Magnum. A full clockwise turn of the screws will lower the action by $\frac{1}{64}$ ". Turn the screws counterclockwise to raise the action. See Figure 2, page 4.

A third screw, mounted in the rear surface of the body, changes the height of the back of the tailpiece. For most action adjustments, it is not necessary to adjust this screw. For performance of the mute, however, the bottom of the tailpiece should be parallel to the top of the body.

All Magnum basses are set with the following "standard action" before they leave the factory: $\frac{8}{64}$ " (3.175 mm) for the bass E string, and $\frac{7}{64}$ " (2.778 mm) for the treble G string. Some players who experience fret buzz (or "slap") while playing hard may require a higher setting: $\frac{10}{64}$ " (3.969 mm) for the bass E string, and $\frac{8}{64}$ " (3.175 mm) for the treble G string.

Lever-Action Mute

The Magnum tailpiece has a built-in, lever-action mute. A rubber pad dampens the vibration of the strings to reduce their sustain. The mute can be quickly switched on or off, as desired. See Figure 3, page 4.

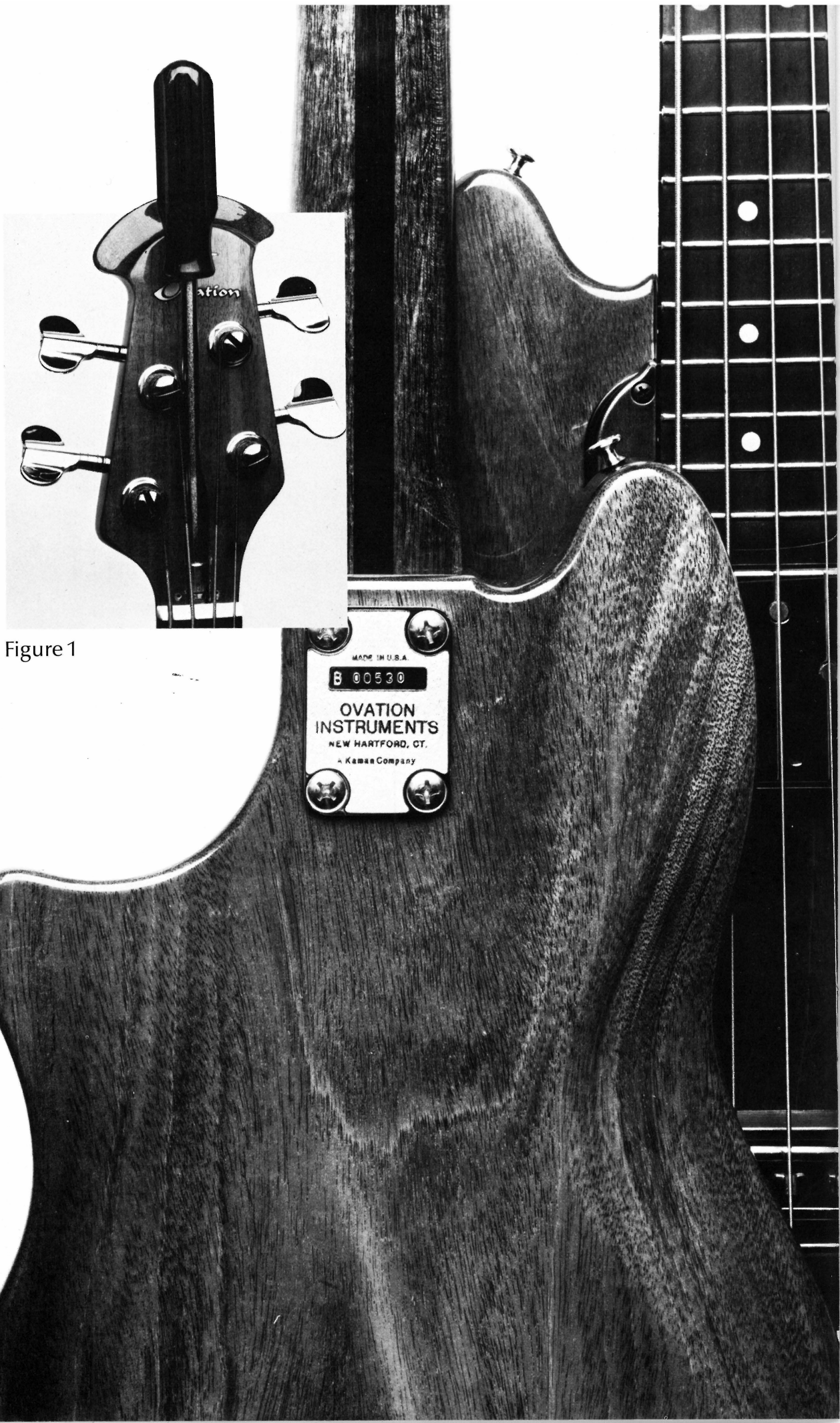


Figure 1

Neck

The Magnum neck has been engineered to be resistant to warp or bow. A new material, called carbon-graphite, keeps the neck straight and accurate. Graphite is as strong as steel, but with $\frac{1}{3}$ the weight. There is one strip in the back of the neck and two under the fingerboard. With the tension rod, the Magnum neck is more than twice as strong as wood alone.

Tension Rod Adjustment

If you feel that your instrument may need a tension rod adjustment, use the following procedure to check the neck for warp or bow:

1. Hold down the bass string, E, at the 1st fret. With your right hand, hold the string at the 17th fret. Check the clearance between the string and the top of the 7th fret. It should be between .010" and .032" ($\frac{1}{32}$ "). Check the treble string, G, in the same manner. If the clearance for either string exceeds .047" ($\frac{3}{64}$ "), the neck is warped.

2. Use the same procedure to check for a bowed neck. If either the bass or the treble string touches at the 7th fret, the neck is bowed.

To correct a bowed neck, remove the rod cover and loosen the tension rod by turning it counterclockwise (use a standard $\frac{1}{4}$ " hex nut driver). Loosen it until a slight clearance can be seen at the 7th fret. See Figure 1, page 6.

To correct a warped neck, tighten the tension rod by turning it clockwise. Make sure that you do not loosen the clearance between either the bass string or the treble string and the 7th fret. If the neck is severely warped, it may require refretting or replacement. Consult your Ovation dealer if you are in doubt.

We recommend that you have your dealer check your tension rod adjustment within 90 days of the original date of purchase.

Neck Attachment

The Magnum bass has a bolted and glued neck attachment. The bolt-on feature facilitates service procedures that can best be accomplished when the neck is separate from the body.

The neck is secured to the body with four bolts that screw into T-nuts embedded in the heel of the neck. Unlike wood screws, the bolts will not work themselves loose after repeated removal. A competent repairman can break the glue joint when it is necessary to remove the neck for servicing. The neck can be reglued when put back on the body and, when bolted, will automatically be set in the correct position.

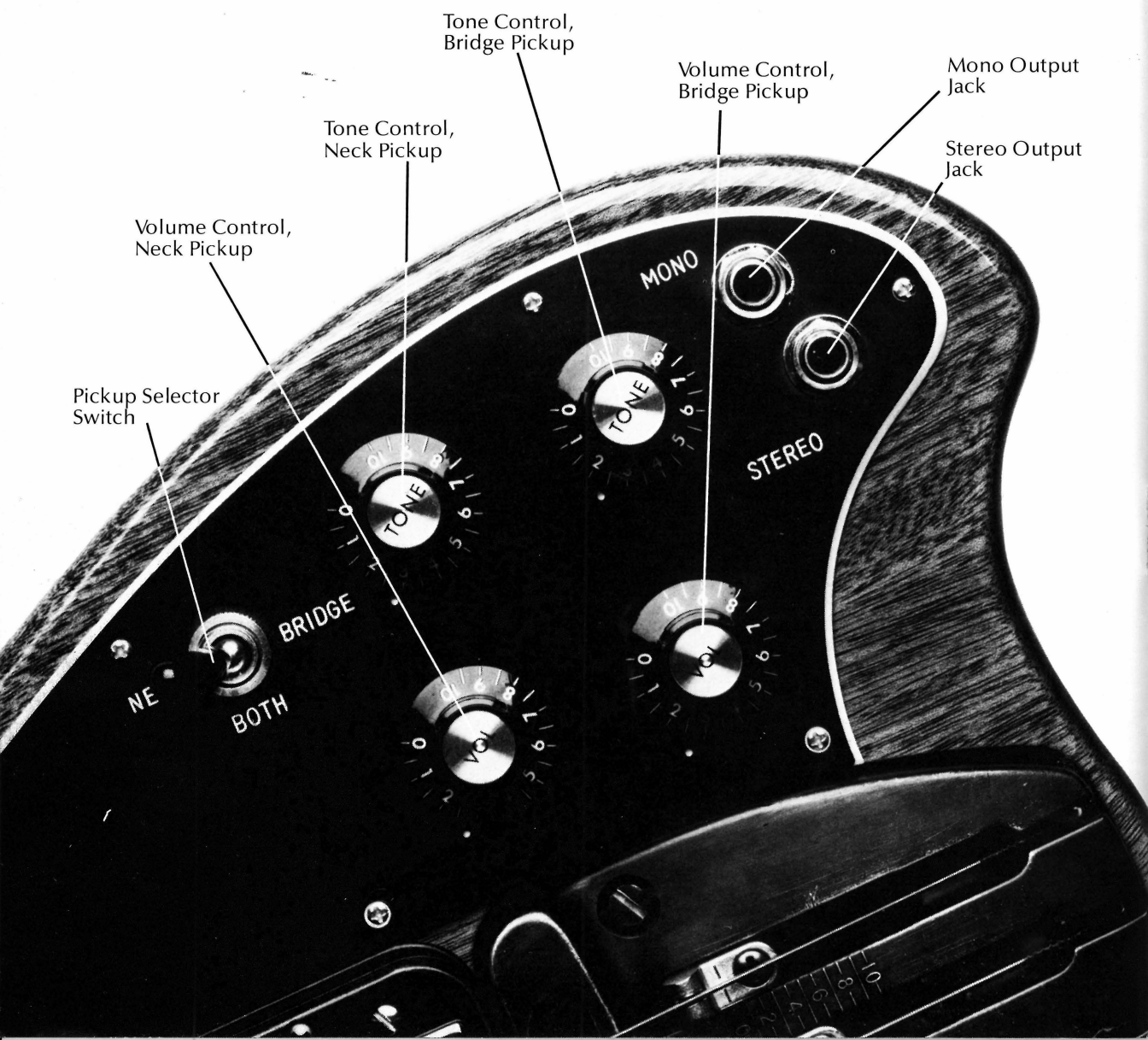
Note: We strongly recommend that removal of the neck be attempted only by an authorized Ovation repairman.



Figure 1



Figure 2



Magnum 1 Electronics

The Magnum 1 electronics have been designed to give you tonal versatility with simple, logical controls.

When viewed in the playing position, the volume controls are adjacent to the tailpiece. One control adjusts the neck pickup; the other control adjusts the bridge pickup. Both are graduated from 0-10. Clockwise rotation increases volume, and counterclockwise rotation lowers volume.

The Magnum 1 also has tone controls for each pickup. The tone controls "roll-off" treble response for a warm, deep tone. The controls are graduated from 0-10. When set at ten, the pickups produce maximum treble response. As the controls are turned counterclockwise toward 0, treble response diminishes. At 0, the pickups produce their maximum bass response.

A pickup selector switch gives you the options of playing the neck pickup, the bridge pickup alone, or both pickups together.

Magnum 1 features a standard mono output jack and a stereo output jack (see Fig. 1, page 8). The stereo jack splits pickup response into two separate channels. This allows you to play the instrument into both channels of a two-channel amplifier. By presetting the tone controls on the amp, you can achieve wide tonal contrasts between the neck and the bridge pickups. See Fig. 2, page 8.

When used in stereo, the Magnum 1 may also be played through two separate amplifiers. The neck pickup will play through one amp, and the bridge pickup through the other amp. Both pickups must be used to achieve output from both amplifiers.

Your Magnum has been shipped with a stereo cord. Please read the instructions with the cord for proper operation.

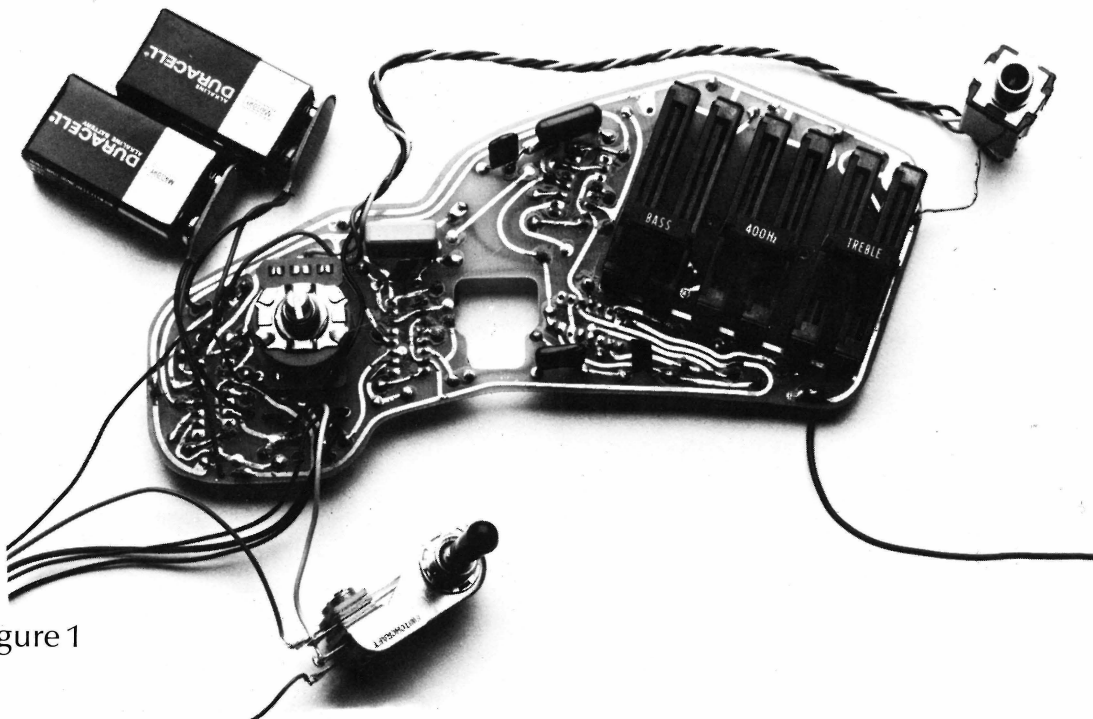
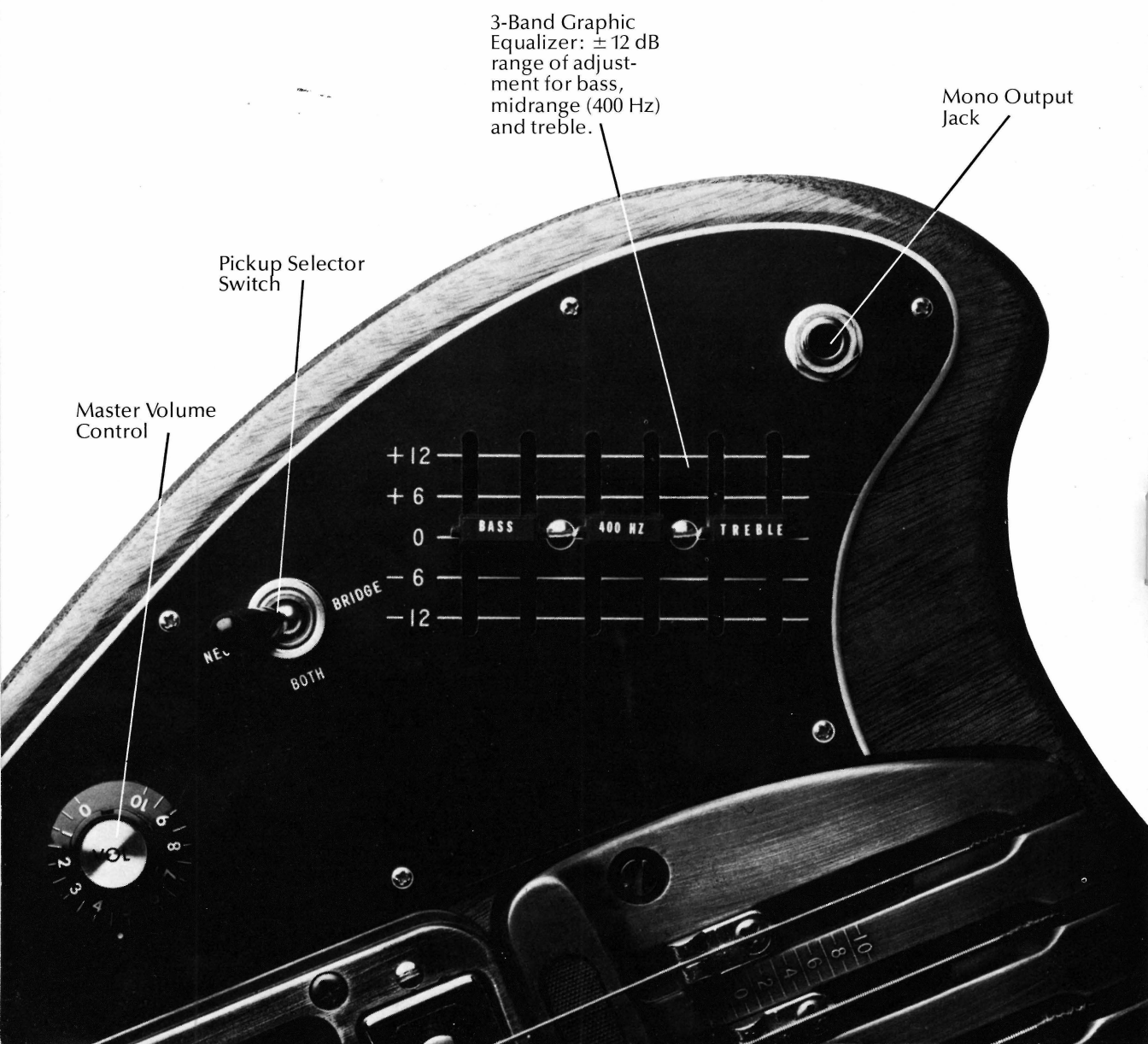


Figure 1

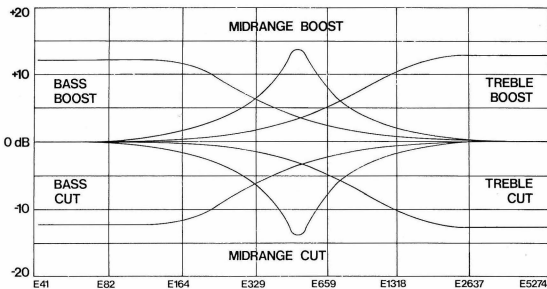


Magnum 2 Electronics

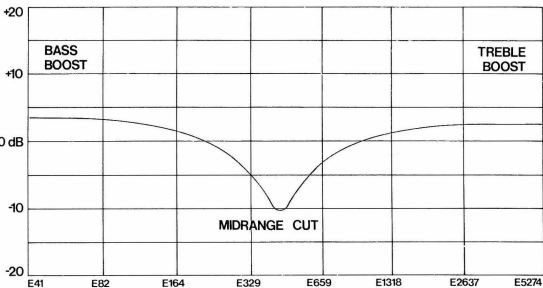
Magnum 2 features state-of-the-art, "active" electronics. The package includes a built-in preamplifier that uses 8 low-noise, low-current opamps (signal-to-noise ratio: -98 dB). The three-band graphic equalizer has a ± 12 dB range of adjustment for bass, midrange (400 Hz) and treble. Magnum 2 can achieve subtle or large tonal gradations without amplifier adjustment. A master volume control, a pickup selector switch and a mono output jack complete Magnum 2's electronics. See Figure 1, page 10.

Volume Compensation

The preamplifier in Magnum 2 allows you to make tone changes without volume loss. The following response curve shows the combined effect of each of the three slide controls without volume compensation. Each control can boost or cut its respective frequency range by about 13-15 dB.

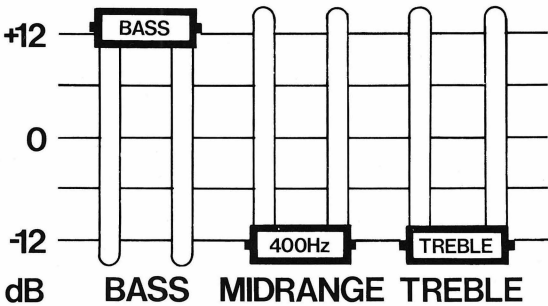


So your ear will hear these tone changes without a loss or gain of signal strength, volume compensation has been added. In simplest terms, volume compensation means that when any control is set at -12 dB, the signal strength is appropriately increased to give you consistent volume. Conversely, when any control is set at +12 dB, the overall signal strength is decreased. The net result for each control is a maximum ± 12 dB tone change without volume change. The following response curve shows the output of the midrange control alone, with volume compensation.

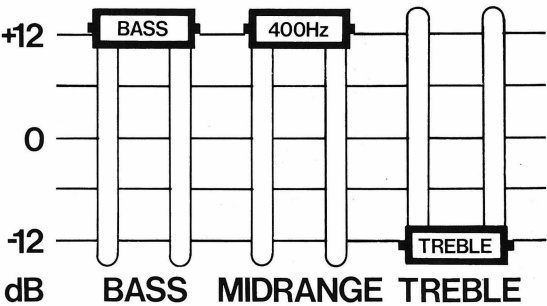


Tone Settings

Magnum 2 is capable of producing an infinite variety of tone settings. Obviously, it is not possible to include them all. The following are offered as typical settings:



A. Maximum bass response with no treble and midrange.



B. Maximum bass response with midrange and no treble.

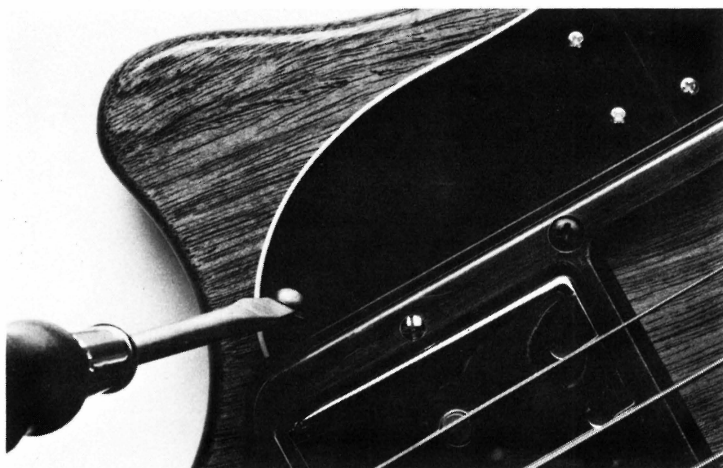
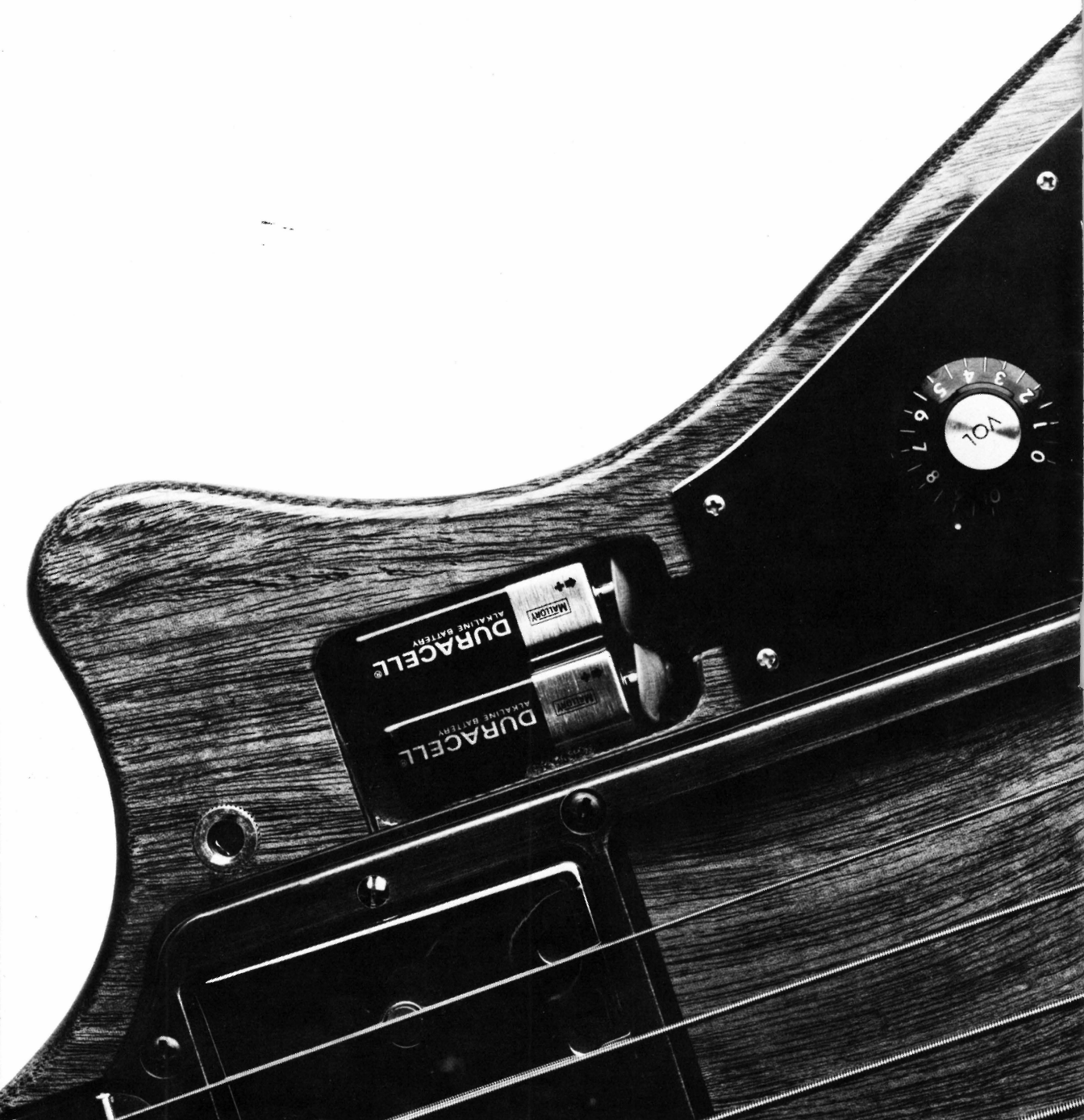
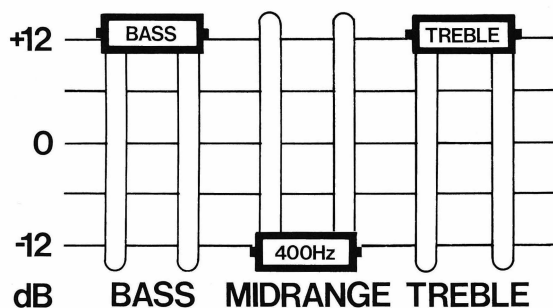


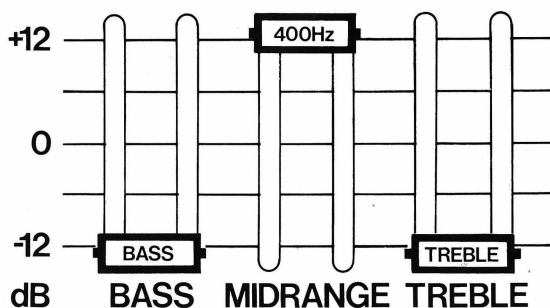
Figure 1



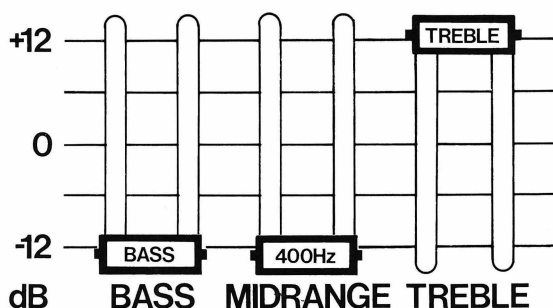
Magnum 2 Electronics



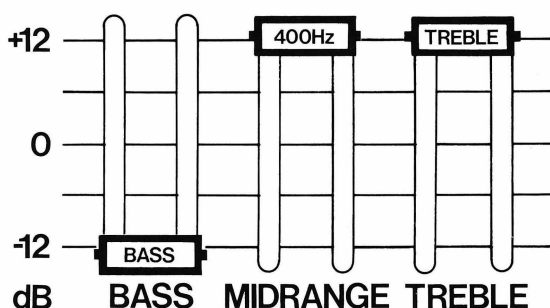
C. Maximum bass and treble with no midrange. Most acoustic sound.



D. Maximum midrange with no bass and treble response.



E. Maximum treble response, brightest sound. Note: For optimum performance, reduce the treble setting on your amplifier.



F. Maximum treble and midrange with no bass response.

See the inside back cover for corresponding Magnum 2 response curves.

Battery Replacement

Magnum 2's preamplifier is powered by two 9-volt batteries. We recommend alkaline batteries for optimum performance. The shelf life of a new battery is approximately one year. The frequency of replacement will depend on how often you play. A fresh battery will offer approximately 1,000 hours of continuous use. The output jack on Magnum 2 has a switch which connects the batteries only when a cord is plugged into the instrument.

The battery cavity is located beneath the upper portion of the pickguard. A quarter-turn screw loosens the battery cover for removal. See Fig. 1, page 12. Replace the batteries and the battery cover.

Note: Other than battery replacement, we recommend that all service adjustments of the Magnum 2 electronics be done by a competent repairman or your Ovation dealer.

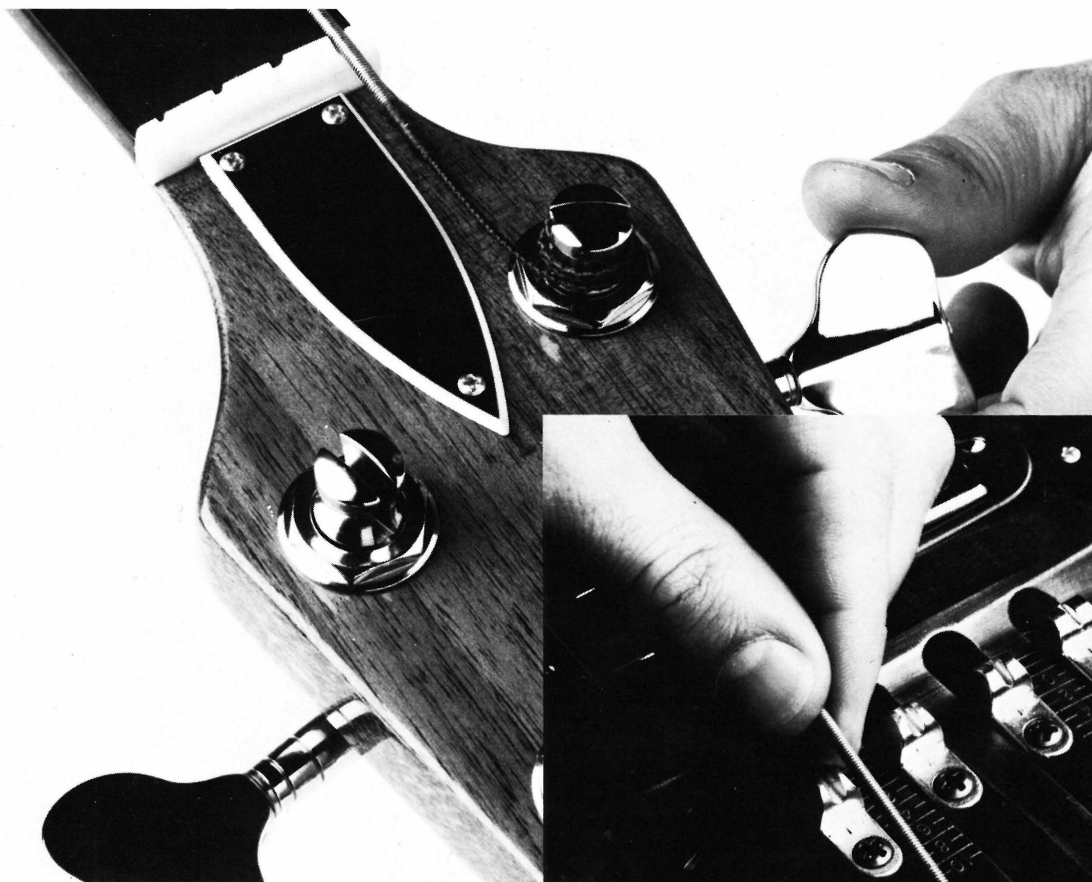


Figure 3

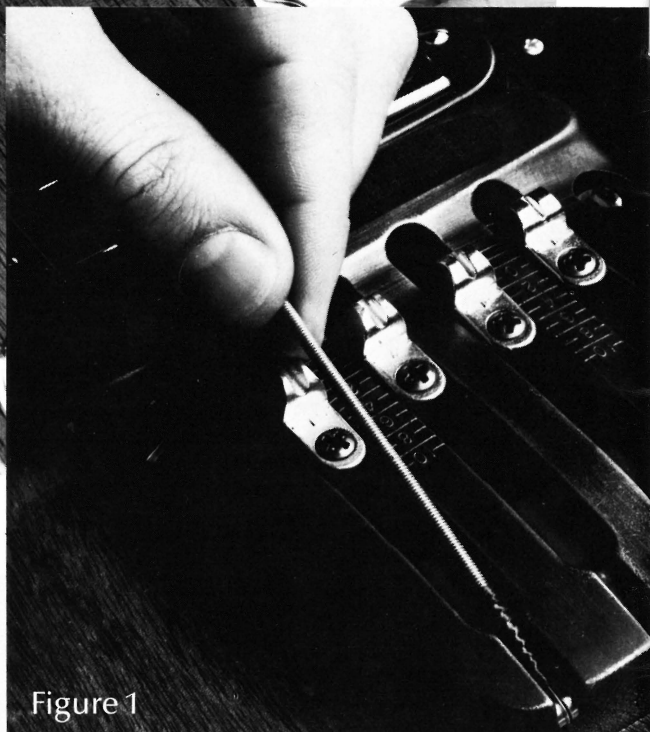


Figure 1



Figure 2

Restringing

Restringing the Magnum is a fast, simple procedure. The tailpiece has been specially designed to facilitate string replacement under performance conditions. When buying replacement strings for your bass, we recommend Ovation strings. If you use another brand, you must specify EXTRA LONG.

Remove all the strings and clean the fingerboard and peghead thoroughly. Starting with the bass string, E, fit the ball end of the string snugly into the appropriate slot in the tailpiece (see Fig. 1). Then, at the peghead end of the string, make a 90° angle bend about $\frac{3}{4}$ " from the end of the string (Fig. 2). This end of the string should be inserted into the hole in the center of the tuning machine post. Note that when properly inserted, the string will begin to wrap around the top of the post when the machine is turned (Fig. 3). Wind the string until it is taut.

Note: We recommend that, if possible, you *do not* cut any portion of the string. The chances of the wrap coming loose are much greater if the string has been cut.

When all the strings have been replaced, tune the instrument to pitch. Check the intonation (as shown on page 4) and adjust if necessary.

Service

Careful, precise engineering and the use of quality components have minimized the service your Magnum bass will require. If it is necessary to have your bass serviced, however, your authorized Ovation dealer is equipped to handle most problems. If you desire factory service, write to:

Service Department Manager
Ovation Instruments Inc.
Greenwoods Road
New Hartford, CT 06057
Tel. (203) 379-0721

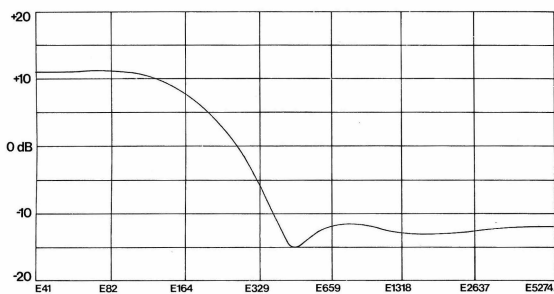
For your own use, we recommend that you record the following information before returning your Owner Registration Card:

Model Number _____ Serial Number _____
Date of Purchase _____
Dealer _____
Dealer's Address _____
Price _____

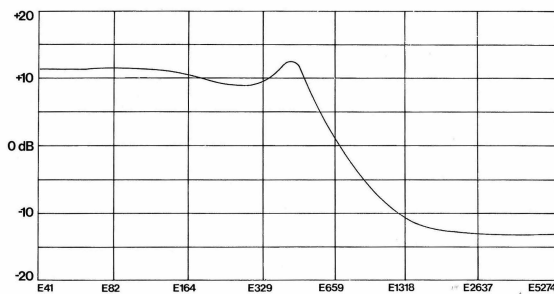
Warranty

A complete statement of the Ovation Limited Lifetime Warranty can be found with the Owner Registration Card shipped with your instrument. Please retain this Warranty for your future reference.

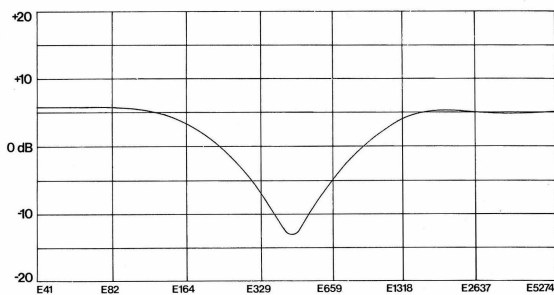
Magnum 2 response curves



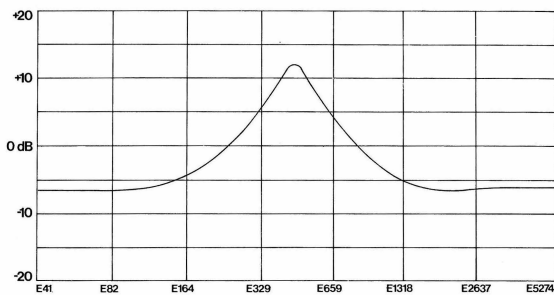
A. Maximum bass response with no treble and midrange.



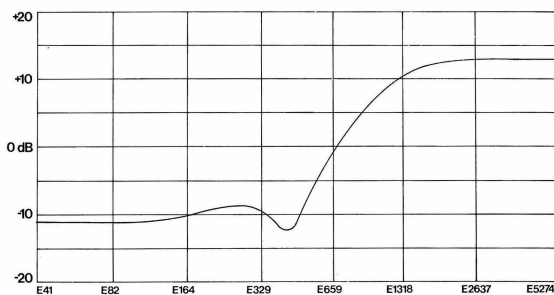
B. Maximum bass response with midrange and no treble.



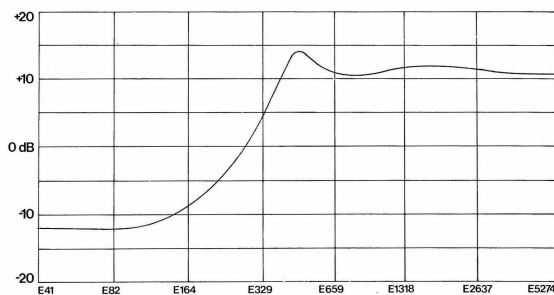
C. Maximum bass and treble with no midrange. Most acoustic sound.



D. Maximum midrange with no bass and treble response.



E. Maximum treble response, brightest sound. Note: For optimum performance, reduce the treble setting on your amplifier.



F. Maximum treble and midrange with no bass response.

Ovation

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